APPENDIX A

Opinion of the Chancery Court of Pulaski County, Arkansas, First Division

No. 131575

SUSAN EPPERSON, *Plaintiff*

v.

W. C. MCDONALD, RUSSELL MATSON, WARREN BASS, JAMES M. COATES, DR. JOHN A. HARRELL and MRS. FRANK GORDON, as Directors of Little Rock School District, and FLOYD PARSONS, as Superintendent of Schools, *Defendants*

HUBERT H. BLANCHARD, JR., *Intervenor*

MEMORANDUM OPINION

This is an action instituted by the plaintiff, as a citizen and resident of Little Rock, Pulaski County, Arkansas, and as a teacher at Little Rock Central High School, employed by the Directors of the Little Rock School District, seeking a declaratory judgment and injunctive relief. Intervenor, Hubert H. Blanchard, Jr., intervened in the action, seeking a declaratory judgment under the terms of the Arkansas Declaratory Judgment Act (Ark. Stats. 34-2501 through 34-2512).

Both the plaintiff and the intervenor allege that Initiated Act No. 1 of 1928 (Ark. Stats. 80-1627 and 80-1628) is unconstitutional and void because the act contravenes certain provisions of the Constitution of the United States and the Constitution of the State of Arkansas.

Act No. 1 of 1928 (Ark. Stats. 80-1627 and 80-1628) reads as follows:

> "80-1627. DOCTRINE OF ASCENT OR DESCENT OF MAN FROM LOWER ORDER OF ANIMALS PROHIBITED.—It shall be unlawful for any teacher or other instructor in any University, College, Normal, Public School, or other institution of the State, which

is supported in whole or in part from public funds derived by State and local taxation to teach the theory or doctrine that mankind ascended or descended from a lower order of animals and also it shall be unlawful for any teacher, textbook commission, or other authority exercising the power to select textbooks for above mentioned educational institutions to adopt or use in any such institution a textbook that teaches the doctrine or theory that mankind descended or ascended from a lower order of animals."

"80-1628. TEACHING DOCTRINE OR ADOPTING TEXTBOOK MENTIONING DOCTRINE—PENALTIES—POSITIONS TO BE VACATED.—Any teacher or other instructor or textbook commissioner who is found guilty of violation of this act (Secs. 80-1627, 80-1628) by teaching the theory or doctrine mentioned in Section 1 (Sec. 80-1627) hereof, or by using, or adopting any such textbooks in any such educational institution shall be guilty of a misdemeanor and upon conviction shall be fined not exceeding five hundred dollars ($500.00); and upon conviction shall vacate the position thus held in any educational institutions of the character above mentioned or any commission of which he may be a member."

Section 4 of Article 14 of the Constitution of the State of Arkansas reads as follows:

"Section 4. SUPERVISION OF SCHOOLS.—The supervision of public schools and the execution of the laws regulating the same shall be vested in and confided to such officers as may be provided for by the General Assembly."

The First Amendment to the Constitution of the United States reads as follows:

"(RELIGIOUS AND POLITICAL FREEDOM.)—Congress shall make no law respecting an establish-

ment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or of the right of the people peaceably to assemble, and to petition the government for a redress of grievances."

Section 1 of the Fourteenth Amendment to the Constitution of the United States reads as follows:

"Sec. 1. (CITIZENSHIP—DUE PROCESS OF LAW —EQUAL PROTECTION.)—All persons born or natualized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the state wherein they reside. No state shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any state deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws."

Let it be understood at the outset that this Court is not unmindful of the public interest in this case, or of the vital concern of many people in what theories may be taught in the schools, colleges and universities of this state.

The engrossing questions relating to the origin of man, the destiny of man, and the creation of the universe have engaged the thoughts and commanded the attention of the world's greatest philosophers, scientists, theologians, and educators. These questions cannot be answered by the enactment of laws or by the decisions of courts.

In view of the fact that many people have apparently misinterpreted the decisions of the United States Supreme Court regarding the teaching of the Bible in the public schools of our Nation, an explanatory statement seems appropriate. Statements are frequently heard such as "the Bible has been banned from the schools" and "the Bible cannot be taught in the schools". Such statements are not

consistent with the language of the decisions of the Supreme Court. In the recent case of *Abington School District* v. *Schempp*, 374 U.S. 203, 10 L. ed. 2d 844, Mr. Justice Clark, speaking for the Court, made the following statement:

> "In addition, it might well be said that one's education is not complete without a study of comparative religion or the history of religion and its relationship to the advancement of civilization. It certainly may be said that the Bible is worthy of study for its literary and historic qualities. Nothing we have said here indicates that such a study of the Bible or of religion, when presented objectively as a part of a secular program of education, may not be effected consistently with the First Amendment."

Judge Clark's opinion speaks for the majority and its language refutes any contention that the Bible or religion may not be taught in the schools nor studied in the schools.

In a concurring opinion in the same case Judge Brennan said:

> "The holding of the Court today plainly does not foreclose the teaching about the Holy Scriptures or about the differences between religious sects in classes in literature or history. Indeed, whether or not the Bible is involved, it would be impossible to teach meaningfully many subjects in the social sciences or the humanities without some mention of religion. To what extent, and at what points in the curriculum, religious materials should be cited are matters which the courts ought to entrust very largely to the experienced officials who superintend our Nation's public schools. They are experts in such matters, and we are not."

This Court does not interpret the decisions of the United States Supreme Court as prohibiting the teaching of the Bible in the public schools. It is not the teaching of the Bible account of the creation of man contained in the Book

of Genesis that is prohibited in the public schools, but it is the conduct of "a religious observation", or, "a religious exercise" which the Supreme Court has said the Constitution prohibits. The Supreme Court has ruled that school boards and officials cannot prescribe and require an official prayer, but this is far from ruling the Bible out of the public schools, statements to the contrary notwithstanding.

Religious practices may be tested or challenged in courts, but religious beliefs or experiences are beyond the competency of courts to prove or disprove. The truth or the fallacy of a scientific theory or doctrine (like a religious doctrine or belief) is not a triable issue in court.

The issue presented for determination in this case is whether or not the statute conflicts with the constitutional provisions securing the rights of freedom of speech, of thought, and expression, and securing the right to teach and the freedom to learn. Whether "the theory or doctrine that mankind ascended or descended from a lower order of animals" is true or false is not the issue presented, and, as above pointed out, is not a triable issue. The truth or the fallacy of arguments on each side of the evolution debate does not either contribute to or diminish the constitutional right of teachers and scientists to advance theories and to discuss them.

Any statute which seeks to limit or restrict the field of inquiry should be carefully and closely examined by the courts. "Teachers and students must always remain free to inquire, to study and to evaluate." *Shelton* v. *Tucker*, 364 U.S. 479, 5 L. ed. 2d 231.

The field of science necessarily involves the discussion and evaluation of *speculative theories*. This has been recognized by the Supreme Court of the United States in the following language:

> "For society's good—if understanding be an essential need of society—inquiries into these problems, speculations about them, stimulation in others of reflection upon them, must be left as unfettered as possible.

> Political power must abstain from intrusion into this activity of freedom, pursued in the interest of wise government and people's well-being, except for reasons that are exigent and obviously compelling." *Sweezy* v. *New Hampshire*, 354 U.S. 234, 1 L. ed. 2d 1311.

In view of the testimony of the plaintiff that she does not propose, intend, or desire to teach as a proved and established fact the theory that mankind ascended or descended from a lower order of animals, set out in the textbook adopted by the Little Rock School Administration, this Court can find no "exigent and obviously compelling" reason to prohibit a teacher from presenting and explaining the theory along with other theories or doctrines which a student may accept or reject, even though the theory may be objectionable to many of our citizens. By use of the word "teach" the court accepts the common definition "to make aware of by information or to impart the knowledge of". That this is the meaning of the word "teach" intended by the statute is obvious since the statute forbids any teacher, textbook commission or other authority to adopt "a textbook that *teaches* the doctrine or theory".

This Court has carefully considered the holding in the Scopes case. *Scopes* v. *State of Tennessee*, 154 Tenn. 105, 289 S.W. 363. It seems that the decision in that case was based principally upon the theory that "In dealing with its own employees engaged upon its own work, the State is now hampered by the limitation . . . . of the Fourteenth Amendment to the Constitution of the United States". Counsel for plaintiff and intervenor contend that the Scopes case has been completely overruled while the Attorney General argues that the decision in that case has only been modified. Even if the decision has not been completely overruled by later decisions of the United States Supreme Court, it is the opinion of this Court that the holding in the Scopes case has been modified and made obsolete to

such an extent that it does not apply to the case at bar and that it should not be followed. *Gitlow* v. *New York*, 268 U.S. 652, 69 L. ed. 1138; *Torcaso* v. *Watkins*, 367 U.S. 488, 6 L. ed. 2d 982; *Beilan* v. *Board of Education*, 357 U.S. 399, 2 L. ed. 2d 1414.

The Fourteenth Amendment to the United States Constitution encompasses the first ten amendments to the Constitution and the guarantees therein contained. A state may not extinguish the freedoms guaranteed by the Constitution arbitrarily or unreasonably even in the exercise of the police power. Whether a statute is wise or unwise is not for the courts to say, but whether it is reasonable or unreasonable is for the courts to determine. The decision of the United States Supreme Court in the case of *Bartels* v. *Iowa*, 262 U.S. 403, 67 L. ed. 1047, appears to be in point. In that case the state had enacted a statute forbidding the teaching of foreign languages in the public schools. This statute followed the first World War and it was presumed that the German language was not popular with a majority of the citizens of the state. Nevertheless, the United States Supreme Court held that such an act was arbitrary and unreasonable.

This Court is of the opinion that Act No. 1 of 1928 (Ark. Stats. 80-1627 and 80-1628) tends to hinder the quest for knowledge, restrict the freedom to learn, and restrain the freedom to teach, and that a chapter in a biology book, adopted by the school administrative authorities, stating that a specific theory has been advanced by an individual that man ascended or descended from a lower form of animal life, does not constitute such a hazard to the safety, health and morals of the community that the constitutional freedoms may justifiably be suppressed by the state. If it should be held that the teaching of such a theory does constitute such a hazard, then the statute in question obviously fails to protect the student in a private school from the hazard and thus denies the equal protection of the law.

Many people do not agree with the decision of the United States Supreme Court. Others will agree with them. But it is the duty and responsibility of trial courts to follow the decisions of the Supreme Court even when we may not agree with them, if we are going to maintain our constitutional principles. This Court is not unmindful of the general rule that statutes should not be held constitutional where constitutionality is subject to doubt. In the Court's opinion the unconstitutionality of the statute under consideration is not subject to doubt, irrespective of the motives of those who secured its passage.

Therefore, it is the opinion and ruling of this Court that a decree be entered declaring Initiated Act No. 1 of 1928 (Ark. Stats. 80-1627 and 80-1628) unconstitutional and void, and that the defendants have no authority to proceed under the act or to enforce the provisions thereof.

No testimony was offered or showing made in this action that the defendants, as Directors and Superintendent of the Little Rock School District, have threatened or have indicated any intention to dismiss plaintiff from her teaching position, or to cancel her contract to teach in the public schools of Little Rock. Counsel for the Directors of the Little Rock School District and the Superintendent of Schools, who are defendants in this case, announced in open court that the School Board and the school officials would follow the decree of this Court. In view of that statement the Court deems it unnecessary to issue an injunction at this time in aid of the declaratory judgment. However, if an effort is made in the future to enforce the statute an injunction would be appropriate.

Counsel for plaintiff and intervenor will prepare a precedent for decree consistent with this opinion and submit the precedent to opposing counsel for approval as to form and then this Court for consideration and signature.

Murray O. Reed, Chancellor

Date: May 27, 1966

DECREE OF THE CHANCERY COURT OF PULASKI COUNTY, ARKANSAS,

NO. 131575.

This cause is this day submitted to the Court for its consideration and decree. The plaintiff and intervenor were represented by their attorney, Eugene R. Warren, Esq., the defendants by their attorney, Herschel H. Friday, Jr., Esq., and the State of Arkansas by its attorneys, Honorable Bruce Bennett, Attorney General and Honorable Fletcher Jackson, Assistant Attorney General. The cause was submitted to the Court upon the complaint of the plaintiff, the intervention of the intervenor, the answer of the defendant and the answer of the State of Arkansas, and upon testimony of witnesses for both the plaintiff and the intervenor and the State of Arkansas and documentary evidence, from all of which the Court finds:

1. Initiated Act No. 1 of 1928 (Ark. Stat. 80-1627 and 80-1628) is unconstitutional and void.

2. It is unnecessary that an injunction be issued at this time in aid of this declaratory judgment. The Court should, however, retain jurisdiction of the cause to issue an injunction if any effort is made in the future to enforce said unconstitutional and void statute.

IT IS, THEREFORE, CONSIDERED, ORDERED, ADJUDGED AND DECREED that Initiated Act No. 1 of 1928 is hereby declared unconstitutional and void. The Court retains jurisdiction of this cause to issue such orders as may be necessary in aid of this declaratory judgment. The memorandum opinion heretofore issued by the Court is made a part of this decree. Each party, hereto, shall bear his respective cost herein expended.

MURRAY O. REED, Chancellor

Date: June 16, 1966

APPENDIX B

OPINION OF THE SUPREME COURT OF ARKANSAS

Present: All the Justices

Opinion Per curiam

• • • • •

Supreme Court of Arkansas

No. 5-4127

Opinion Delivered June 5, 1967

Appeal from Pulaski Chancery Court, First Division

Reversed and dismissed

• • • • •

State of Arkansas

v.

Susan Epperson and H. H. Blanchard

• • • • •

Upon the principal issue, that of constitutionality, the court holds that Initiated Measure No. 1 of 1928, Ark. Stat. Ann. Sec. 80-1627 and 80-1628 (Repl. 1960), is a valid exercise of the state's power to specify the curriculum in its public schools. The court expresses no opinion on the question whether the Act prohibits any explanation of the theory of evolution or merely prohibits teaching that the theory is true; the answer not being necessary to a decision in the case, and the issue not having been raised.

The decree is reversed and the cause dismissed.

Ward, J., concurs. Brown, J., dissents.

June 5, 1967

FINAL ORDER OF THE SUPREME COURT OF ARKANSAS

Proceedings of a Special Session on Wednesday, July 26, 1967. Court convened pursuant to the call of the Chief Justice.

Present: Carleton Harris, Chief Justice; George Rose Smith; J. Fred Jones; Paul Ward; John A. Fogleman; Conley Byrd.

Absent: Lyle Brown

Court met this day and made the following orders:

Rehearing Petitions Denied. Petitions for rehearing were denied in the following causes:

. . . .

#4127 State of Arkansas v. Susan Epperson, et al.

. . . .

July 26, 1967

APPENDIX C

Is Biological Evolution a Principle of Nature That Has Been Well Established by Science?

It has for many years been well established scientifically that all known forms of life, including man, have come into being by a lengthy process of evolution. It is also known today that very primitive forms of life, ancestors of present-day microbes, arose thousands of millions of years ago. They constituted the trunk of a "tree of life" which in growing branched more and more. That is, some of the later descendants of these earliest living things, passing beyond the level of microbes, became ever more diverse in their kinds, and increasingly different from one another, and some of them came to have a much more complicated organization, that we call more advanced. Man and the other highly organized types of today constitute the present

end-twigs of that tree. The human twig and those of the apes sprang from the same ape-like progenitor twig.

Scientists consider that none of their principles, no matter how firmly established, and no ordinary "facts" of direct observation either, are absolute certainties. Some possibility of human error, even if very slight, always exists. Therefore, instead of there being sharp lines separating "hypothesis," "theory," and "fact," there is a sliding scale of probabilities. Scientists welcome the challenge of further testing of any view whatever. They use such terms as "firmly established only for conclusions founded on rigorous evidence that have continued to withstand searching criticism. The principle of biological evolution, as above depicted, meets these criteria exceptionally well. It rests on a multitude of discoveries of very different kinds, that concur and complement one another. It is therefore "accepted" into man's general body of knowledge by scientists and by other reasonable persons who have familiarized themselves with the evidence.

Among the sources of these different kinds of evidence are the following. (1) Fossil records, now abundantly known, of previously existing life. (2) Careful comparisons of the structure of different living things that are visible to one's naked eye by inspection and dissection of them. (3) Careful comparison of their inner workings, that is, their physiology, including their behavior. (4) Comparisons of their development from the earliest embryos to the oldest adult types. (5) Comparisons of their microscopic and ultra-microscopic structures and of the transformations they can be seen to undergo during the course of living. (6) Comparisons of the details of the complicated chemistry of different living things, an extremely deep and intricate subject nowadays. (7) Studies of the pattern of distribution of different kinds of living things on this earth, both at present and in the past. (8) Studies of how plants now cultivated and animals now domesticated have changed as a result of selection prac-

ticed on them by man, and the elaborate and far-reaching laboratory and field studies in genetics that show how, in the course of generations, separated populations of living things become different from one another in their inherited constitutions.

It would be impossible in a few hours to make clear the significance and the weight of this great mass of extraordinary and intricate findings, to persons not already possessed of a considerable biological background. In fact, even they could hardly grasp them in full without long and deep study, preferably extending over years. Moreover, in recent years the evidence in most of the lines mentioned has accumulated much further. This has resulted in the ever firmer establishment and improved understanding of biological evolution, including the further confirmation of the principle of natural selection that Darwin and Wallace more than a century ago showed to be an essential part of the process of biological evolution. There are no hypotheses, alternative to the principle of evolution with its "tree of life", that any competent biologist of today takes seriously. Moreover, the principle is so important for an understanding of the world we live in and of ourselves that the public in general, including students taking biology in high school, should be made aware of it, and of the fact that it is firmly established even as the rotundity of the earth is firmly established.

May 2, 1966 Signed by 179 biologists.

SIGNERS OF STATEMENT ON EVOLUTION, AS OF JUNE 1, 1966. POSITIONS AND INSTITUTIONS ARE FOR IDENTIFICATION ONLY AND NOT AS REPRESENTING THE INSTITUTIONS.

Abrahamson, Seymour,
Assoc. Prof., Zool. Dept.,
Univ. Wis., Madison

Altenburg, Edgar,
Prof. Emeritus, Biol. Dept.,
Rice Univ., Houston

Amadon, Dean,
Amer. Mus. Nat. Hist., N.Y.C.,
Pres. Amer. Ornithol. Union

Arnon, Daniel I.,
Prof., Cell Physiol.,
Chmn. Cell Physiol. Dept.,
Univ. Calif., Berkeley

Atwood, Kimball C.,
Prof., Microbiol. Dept.,
Univ. Ill., Urbana

Auerbach, Robert,
Prof., Zool. Dept.,
Univ. Wis., Madison

Bailey, Joseph R.,
Prof., Zool. Dept.,
Duke Univ., Durham, N. C.

Baker, William K.,
Prof., Zool. Dept.,
Univ. Chicago

Bates, Marston,
Prof., Zool. Dept.,
Univ. Mich., Ann Arbor

Beadle, George,
President,
Univ. Chicago

Beck, Raymond W.,
Assoc. Prof., Microbiol. Dept.,
Univ. Tenn., Knoxville

Beers, C. Dale,
Zool. Dept., Univ., N.C.,
Chapel Hill

Biesele, John J.,
Prof., Zool. Dept.,
Univ. Tex., Austin

Blackler, Antonio W.,
Assoc. Prof., Div. Biol. Sci.,
Cornell Univ., Ithaca

Blair, W. Frank,
Prof., Zool. Dept.,
Univ. Tex., Austin

Bloch, Konrad,
Prof., Chem. Dept.,
Harvard Univ.

Bogert, Charles M.,
Chmn. Herpetology Dept.,
Amer. Mus. Nat. Hist., N.Y.C.

Bonner, J. T.,
Prof., Chmn. Biol. Div.,
Princeton Univ.

Boyden, Alan,
Prof. Emeritus, Zool. Dept.,
Rutgers Univ.,
New Brunswick, N. J.

Breland, Osmond P.,
Prof., Zool. Dept.,
Univ. Tex., Austin

Brink, R. Alexander,
Prof., Genetics Dept.,
Univ. Wis., Madison

Brown, Spencer W.,
Prof., Genetics Dept.,
Univ. Calif., Berkeley

Bryson, Vernon,
Prof., Inst. Microbiol.,
Rutgers Univ.,
New Brunswick, N. J.

Bucklin, Donald H.,
Prof., Zool. Dept.,
Univ. Wis., Madison

Butler, E. G.,
H. F. Osborn Prof.,
Biol. Div.,
Princeton, Univ.

Calder, William A.,
NSF Fellow, Zool. Dept.,
Duke Univ., Durham, N. C.

Cameron, D. R.,
Prof., Genetics Dept.,
Univ. Calif., Berkeley

Carlson, Elof A.,
Assoc. Prof., Zool. Dept.,
Univ. Calif., Los Angeles

Carlson, J. Gordon,
Head, Zool. Dept.,
Univ. Tenn., Knoxville

Carson, Hampton L.,
Prof., Zool. Dept.,
Washington Univ., St. Louis

Carver, James E., Jr.,
Post-Doct. Research Fellow,
Amherst Coll., Mass.

Coe, Edward H., Jr.,
Prof., Dept. Field Crops,
Univ. Missouri, Columbia

Colbert, Edwin H.,
Prof., Columbia Univ.,
Curator Amer. Mus. Nat. Hist.,
N.Y.C.

Cole, Arthur C.,
Prof., Entomol. Dept.,
Univ. Tenn., Knoxville

Cole, Lamont C., Prof.,
Chmn. Ecol. & Systematics Sect.
Div. Biol. Sci's.,
Cornell Univ., Ithaca

Cook, Robert C.,
Ed. Emeritus "Journal of Heredity"; Ed. & Pres.,
Population Reference Bu., Inc.,
Washington, D. C.

Cooper, Kenneth W.,
Prof., Cytol. & Genetics Dept.,
Dartmouth Med. School,
Hanover, N. H.

Crow, James F.,
Prof. & Chmn., Genetics Dept.,
Univ. Wis., Madison

Davis, A. N.,
Zool. Dept., Duke Univ.,
Durham, N. C.

Davis, Donald M.,
NASA Fellow, Zool. Dept.,
Duke Univ., Durham, N. C.

Davis, Doris A.,
Instr., Biol. Dept.,
N. C. Coll., Durham

Delbruck, Max,
Prof., Biol. Div.,
Cal. Tech., Pasadena

Dempster, Everett R.,
Chmn., Genetics Dept.,
Univ. Calif., Berkeley

Dillon, John R.,
NASA Fellow, Zool. Dept.,
Duke Univ., Durham, N. C.

Doty, Paul
Prof., Chemistry Dept.,
Harvard Univ.

Edgar, Robert S.,
Assoc. Prof., Biol. Div.,
Cal. Tech., Pasadena

Ehrlich, Paul R.,
Assoc. Prof., Biol. Dept.,
Stanford Univ., Calif.

Emerson, Alfred E.,
Prof. Emeritus, Zool. Dept.,
Univ. Chicago

Emlen, John L.,
Prof., Zool. Dept.,
Univ. Wis., Madison

Engels, William L.,
Zool. Dept., Univ. N. C.,
Chapel Hill

Faber, Lee E.,
Research Asst., Biol. Dept.,
Bowling Green State Univ.,
Ohio

Forrest, Hugh S.,
Prof., Zool. Dept.,
Univ. Tex., Austin

Fox, Allen S.,
Prof., Genetics Dept.,
Univ. Wis., Madison

Fraser, Lemuel A.,
Prof. & Chmn., Zool. Dept.,
Univ. Wis., Madison

Fraser, Ronald C.,
Prof., Zool. Dept.,
Univ. Tenn., Knoxville

Fustrom, James W.,
Asst. Prof., Genetics Dept.,
Univ. Calif., Berkeley

Giese, Arthur C.,
Prof., Biol. Dept.,
Stanford Univ., Calif.

Gilbert, Barrie K.,
Grad. Stud., Zool. Dept.,
Duke Univ., Durham, N. C.

Glass, Bentley,
Disting. Prof., Biol. Dept.
& Acad. Vice Pres.,
State Univ. of N. Y.,
Stoney Brook, L.I.

Granick, Sam,
Prof. & Member,
Rockefeller Univ., N.Y.C.

Green, Earl L.,
Snr. Staff Scientist &
Director, Jackson Lab.,
Bar Harbor, Me.

Grobman, Arnold B.,
Dean, Coll. Arts & Sci's.,
N. J. State Univ.,
New Brunswick

Hagen, Charles W., Jr.,
Assoc. Dean, Coll. Arts & Sci's.,
Ind. Univ., Bloomington

Hagaedorn, R.,
Asst. Prof.,
Univ. N. C., Chapel Hill

Halil, J. J.,
Grad. Stud., Zool. Dept.,
Duke Univ., Durham, N. C.

Hamilton, Terrell H.,
Asst. Prof., Zool. Dept.,
Univ. Tex., Austin

Hardin, Garrett,
Prof., Biol. Dept.,
Univ. Calif., Santa Barbara

Harreveld, A. van,
Prof., Psychol. Dept.,
Cal. Tech., Pasadena

Hartman, Philip E.,
Prof., Biol. Dept.,
Johns Hopkins Univ.,
Baltimore, Md.

Hasler, A. D.,
Prof., Zool. Dept.,
Univ. Wis., Madison

Heston, W. E. (Ph.D., LL.D.),
Chief, Biol. Lab.,
Natl. Cancer Inst.,
Bethesda, Md.
& Ruling Elder Presbyterian
Church, U. S.

Hexter, William M.,
Assoc. Prof., Biol. Dept.,
Amherst Coll., Mass.

Hoehman, Benjamin,
Assoc. Prof., Zool. Dept.,
& Geneticist,
Univ. Tenn., Knoxville

Holm, Richard W.,
Prof. of Biol. Sci's.,
Stanford Univ., Calif.

Holtman, D. Frank,
Head, Microbiol. Dept.,
Univ. Tenn., Knoxville

Horowitz, N. H.,
Prof., Biol. Div.,
Cal. Tech., Pasadena

Hotton, Nicholas, III,
Assoc. Curator, Fossil
Amphibians & Reptiles,
Vertebrate Paleontology Div.,
Smithsonian Institution,
U. S. Nat'l Mus., Washington

Howell, J. C.,
Assoc. Prof., Zool. Dept.,
Univ. Tenn., Knoxville

Howells, W. W.,
Prof., Anthropol. Dept.,
Harvard Univ.

Hoyer, Bill H.,
Head, Biochem. & Biophys.
Sect., Biol. of Viruses Lab.,
Natl. Inst. of Allergy &
Infectious Diseases,
Natl. Inst. Health,
Bethesda, Md.

Hubbs, Carl L.,
Prof. Emeritus, Biol. Dept.,
Univ. Calif., San Diego

Ives, Philip T.,
Research Assoc.,
Amherst, Coll., Mass.

James, Charles E.,
Zool. Dept.,
Univ. N. C., Chapel Hill

Janner, James T.,
Assoc. Prof., Entomol. Dept.,
Univ. Tenn., Knoxville

Jepsen, Glenn L.,
Sinclair Prof.,
Vertebrate Paleontology Dept.,
Princeton Univ.

Jones, Arthur M.,
Prof., Zool. Dept.,
Univ. Tenn., Knoxville

Judd, Burke H.,
Assoc. Prof., Zool. Dept.,
Univ. Tex., Austin

Kendall, Robert L.,
Grad. Stud., Zool. Dept.,
Duke Univ., Durham, N. C.

Kennedy, Donald,
Prof., Biol. Dept.,
Stanford Univ., Calif.

Kimball, R. F.,
Sr. Biologist, Oak Ridge
Natl. Lab., Tenn.

Kircher, Ann B.,
Grad. Stud., Zool. Dept.,
Duke Univ., Durham, N. C.

Klopfer, Peter H.,
Assoc. Prof., Zool. Dept.,
Duke Univ., Durham, N. C.

Lambe, Catherine Underhill,
Grad. Stud., Zool. Dept.,
Duke Univ., Durham, N. C.

Laughnan, John R.,
Prof., Botany & Plant,
Genetics Depts.,
Univ. Ill., Urbana

Lerner, I. Michael,
Prof., Genetics Dept.,
Univ. Calif., Berkeley

Lewis, E. B.,
Prof., Biol. Div.,
Cal. Tech., Pasadena

Lewis, Harlan,
Dean, Life Sci's Div.,
Univ. Calif., Los Angeles

Libby, William J.,
Asst. Prof. & Adviser,
Genetics Dept.,
Univ. Calif., Berkeley

Liles, James N.,
Assoc. Prof., Entomol. Dept.,
Univ. Tenn., Knoxville

McElroy, William D.,
Prof., Chmn. Biol. Dept., &
Director, McCollum-Pratt Inst.,
Johns Hopkins Univ.,
Baltimore, Md.

McFarland, William N.,
Assoc. Prof., Biol. Sci's. Div.,
Cornell Univ., Ithaca

McKean, Hanley E.,
Visiting Assoc. Prof.,
Genetics Dept.,
Univ. Calif., Berkeley

McShan, W. H.,
Prof. of Zoochemistry,
Zool. Dept.,
Univ. Wis., Madison

Meyer, Helen U.,
Project Asst., Med.,
Genetics & Zool. Depts.
Univ. Wis., Madison

Merrell, David J.,
Prof., Genetics Dept.,
Univ. Minn., Minneapolis

Muller, Herman J.,
Prof. Emeritus, Zool. Dept.,
Ind. Univ., Bloomington

Myers, Jack,
Prof., Zool. Dept.,
Univ. Tex., Austin

Neuffer, M. G.,
Assoc. Prof., Field Crops Dept.,
Univ. Mo., Columbia

Nicklas, R. B.,
Assoc. Prof., Zool. Dept.,
Duke Univ., Durham, N. C.

Noland, Lowell E.,
Prof., Zool. Dept.,
Univ. Wis., Madison

Novitski, E., Prof.,
Head, Biol. Dept.,
Univ. Ore., Eugene

Oliver, Clarence P.,
Prof., Zool. Dept.,
Univ. Tex., Austin

Olson, Everett C.,
Prof., Geophysical Sci. Dept.,
Univ. Chicago

Osgood, David W.,
Teaching Asst., Zool. Dept.,
Duke Univ., Durham, N. C.

Oster, Irwin I.,
Prof., Biol. Dept., Bowling
Green State Univ., Ohio

Owen, H. Malcolm,
Head, Biol. Dept.,
Univ. of the South,
Sewanee, Tenn.

Owen, Ray D., Prof.,
Cal. Tech., Pasadena

Perkins, David D.,
Prof., Biol. Dept.,
Stanford Univ., Calif.

Pincus, Gregory,
Worcester F'nd'n
for Exper. Biol.,
Shrewsbury, Mass.

Pipkin, Sarah Bodichek,
Biol. Dept., Johns Hopkins
Univ., Baltimore, Md.

Pittendrigh, Colin S.,
Prof., Biol. Dept., &
Dean, Grad. School,
Princeton Univ.

Plough, Harold H.,
Prof. Emeritus, Biol. Dept.,
Amherst Coll., Mass.

Powers, E. C.,
Prof., Zool. Dept.,
Univ. Tex., Austin

Preer, John R., Jr.,
Prof., Zool. Dept.,
Univ. Penna., Philadelphia

Raven, Peter H.,
Asst. Prof., Biol. Dept.,
Stanford Univ., Calif.

Reed, Sheldon C.,
Prof., Genetics Dept.,
Director, Dight Inst. for
Human Genetics,
Univ. Minn., Minneapolis

Riddle, Oscar, Ph.D., LL.D.,
D.H.C., Retired Memb.,
Carnegie Inst. of Wash.

Riggs, Austin,
Prof., Zool. Dept.,
Univ. Tex., Austin

Riley, Herbert P.,
Prof., Botany Dept.,
Univ. Ky., Lexington

Rollins, Reed C.,
Asa Gray Prof. of
Systematic Botany,
Harvard Univ.

Roman, Herschel L.,
Prof. & Chmn., Genetics Dept.,
Univ. Wash., Seattle

Romer, Alfred,
Prof. Emeritus, Zool. Dept.,
Harvard Univ.

Ross, S. Meryl,
Prof., School of Med.,
Tulane Univ., New Orleans
& Fellow, Nat. Inst. Health

Ross, Herbert H.,
Prof., Entomol. Dept.,
Univ. Ill., & Principal Scientist
& Asst. Chief, Ill. Natural
Hist. Survey, Urbana

Rowe, Gilbert I., II,
N.D.E.A. Fellow, Zool. Dept.,
Duke Univ., Durham, N. C.

Sagan, Carl,
Asst. Prof., Astronomy Dept.,
Harvard Univ., & Staff
Memb. Smithsonian Instn.

Schrank, A. R., Prof.,
& Chmn., Zool. Dept.,
Univ. Tex., Austin

Scott, John Paul,
Research Prof., Biol. Dept.,
Bowling Green State Univ.,
Ohio

Sears, E. R.,
Prof., Field Crops Dept.;
Research Geneticist,
U. S. Dept. Agric.,
Univ. Mo., Columbia

Selander, Robert K.,
Assoc. Prof., Zool. Dept.,
Univ. Tex., Austin

Shirley, Emily,
Grad. Stud., Physiol. Dept.,
Duke Univ., Durham, N. C.

Simpson, George Gaylord,
Harvard Univ.

Singleton, W. Ralph,
Miller Prof., Biol. & Agric.,
Univ. Va., Charlottesville

Snyder, Laurence H.,
President Emeritus, Univ.
Hawaii, Honolulu, & Past
Pres., Am. Assoc. Adv. Sci.

Sokoloff, Alexander,
Research Geneticist,
Univ. Calif., Berkeley & Assoc.
Prof., Biol. Dept., Calif. State
Coll., San Bernardino

Soltau, Susan Kae,
Grad. Stud., Zool. Dept.,
Duke Univ., Durham, N. C.

Sonneborn, Tracy M.,
Dist. Serv. Prof., Zool. Dept.,
Ind. Univ., Bloomington

Spiegelman, S.,
Prof., Microbiol. Dept.,
Univ. Ill., Urbana

Spiess, Eliot B.,
Prof., Biol. Dept.,
Univ. Pittsburgh

Spuhler, J. H., Prof., &
Chmn., Anthropol. Dept.,
Univ. Mich., Ann Arbor

Stalker, Harrison D.,
Prof., Zool. Dept.,
Wash. Univ., St. Louis

Standaert, Thomas A.,
Grad. Stud., Zool. Dept.,
Duke Univ., Durham, N. C.

Stebbins, G. Ledyard,
Prof., Genetics Dept.,
Univ. Calif., Davis

Stern, Curt,
Prof., Zool. Dept.,
Univ. Calif., Berkeley

Stone, Wilson S.,
Prof., Zool. Dept.,
Univ. Tex., Austin

Suskind, Sigmund R.,
Prof., Biol. Dept.,
Johns Hopkins Univ.,
Baltimore, Md.

Swanson, Carl P.,
Wm. D. Gill Prof., Biol. Dept.,
Johns Hopkins Univ.
Baltimore, Md.

Swinheimer, Robert L.,
Prof. of Biophysics,
Cal. Tech., Pasadena

Tipton, Samuel R.,
Prof., Zool. Dept.,
Univ. Tenn., Knoxville

Tyler, Albert,
Prof., Biol. Div.,
Cal. Tech., Pasadena

Ursprung, Heinrich,
Assoc. Prof., Biol. Dept.,
Johns Hopkins Univ.,
Baltimore, Md.

Vinograd, Jerome,
Prof. of Biol. & Chem.,
Cal. Tech., Pasadena

Visscher, Maurice B.,
Prof., Physiol. Dept.,
Univ. Minn., Minneapolis

Wagner, R. P.,
Prof., Zool. Dept., &
Director Genetics F'nd'n,
Univ. Tex., Austin

Wald, George,
Prof., Biol. Dept.,
Harvard Univ.

Wallis, Elizabeth T.,
Research Asst., Biol. Dept.,
Bowling Green State Univ.,
Ohio

Washburn, S. L.,
Prof., Anthrop. Dept., &
Director, Primate Behavior
Project, Univ. Calif., Berkeley

Whaley, W. Gordon, Prof.,
Director, Cell Research Inst.,
Univ. Tex., Austin

Wheeler, Marshall R.,
Prof., Zool. Dept.,
Univ. Tex., Austin

Whiting, P. W.,
Prof. Emeritus, Zool. Dept.,
Univ. Penna., & Consultant,
Oak Ridge Nat'l. Lab., Tenn.

Whittinghill, Maurice,
Prof., Zool. Dept.,
Univ. N. C., Chapel Hill

Wood, Albert E.,
Prof., Biol. Dept.,
Amherst Coll., Mass.

Wolff, Sheldon,
Prof. Cytogenetics
Univ. Calif. Med. Center,
San Francisco

Yanofsky, Charles,
Prof., Biol. Dept.,
Stanford Univ. Calif.

Yost, Henry,
Prof., Biol. Dept.,
Amherst Coll., Mass.

Young, Frank N.,
Prof., Zool. Dept.,
Ind. Univ., Bloomington

Zirkle, Conway,
Prof., Botany Dept.,
Univ. Penna., Philadelphia